

Abstract of the Disclosure

METHOD AND APPARATUS FOR RESTRAINING TEMPERATURE
INDUCED DEFORMATION OF A PIEZOELECTRIC DEVICE

Apparatuses and methods for controlling the temperature induced deformation of a piezoelectric device. A piezoelectric device receives an activation signal and displaces in a first direction for a first predetermined distance as a function of the activation signal. The piezoelectric device also displaces in a second direction as a function of a change in temperature of the piezoelectric device. A stop is located a second predetermined distance from the piezoelectric device. The stop prevents the displacement of the piezoelectric device in the second direction beyond a third predetermined distance. A charge redistributing device is coupled with the piezoelectric device. The charge redistributing device redistributes charge on the piezoelectric device due to the temperature change to relieve internal electric fields of the piezoelectric device due to temperature induced deformation of the piezoelectric device.